

INDEX

- A**BSORPTION, intestinal, of chlorides, 603.
- , —, of insulin, alkylresorcinols and, 92.
- of insulin from alimentary tract, 81.
- ABRAMSON, D. I., N. SCHKLOVEN, M. N. MARGOLIS and I. A. MIRSKY. Influence of massive doses of insulin on peripheral blood flow in man, 124.
- Acetylcholine hypotension, factors compensating, 467.
- ACHESON, G. H. The responses of the nictitating membrane of the cat to certain stimulants after ergotoxine, 695.
- Acid stimulation of duodenum, effect of, on blood sugar, 298.
- ADDIS, T., D. D. LEE, W. LEW and L. J. POO. The utilization of parenterally administered horse serum by the rat, 544.
- ADLER, H. F. and R. D. TEMPLETON. The correlation of activity and transportation in the colon of the dog, 514.
- Adrenal and parathyroid glands, relationship between, 577.
- cortex, anterior pituitary extract and, in carbohydrate metabolism, 552.
- gland, relation of renin to, 481.
- insufficiency, blood pressure in, 133.
- relationship, thymus-, 475.
- Adrenaline and nerve stimulation, response of uterine muscle to, 372.
- , calorogenic action of, 281.
- Age and diet, effect of, on electrolyte changes in stimulated muscle, 440.
- Alarm reaction, water balance in, 225.
- Alimentary tract, absorption of insulin from, 81.
- Alimentary. *See* Gastro-intestinal.
- *See* Intestinal.
- Alkylresorcinols and intestinal absorption of insulin, 92.
- ALLEN, W. F. Effect of ablating the frontal lobes, hippocampi and occipito-parieto-temporal (excepting pyriform areas) lobes on positive and negative olfactory reflexes, 754.
- ALPERT, L. K. *See* FARR and ALPERT, 772.
- Amino acids, blood, effect of endocrine extracts on, 772.
- Anesthesia, operation and shock, blood pressure measurements in, 238.
- Anhydrase, gastric carbonic, in dogs, 725.
- Anoxia and hypoglycemia, intracranial pressure during, 185.
- Anterior pituitary extract and adrenal cortex in carbohydrate metabolism, 552.
- Arterial pressure, pulmonary, in renal hypertension, 433.
- Ascorbic acid, diurnal excretion of, 583.
- ASDELL, S. A. *See* BOGART, SPERLING, BARNES and ASDELL, 355.
- ASHMAN, R., W. S. WILDE and C. E. DRAWE. The validity of the electrical doublet theory of the cardiac action current, 547.
- Asphyxia, effect of, on reflex inhibition, 13.
- ATKINSON, A. K. *See* GESELL, ATKINSON and BROWN, 629.
- Atrophy, effects of growth and, on muscle strength, 521.
- in denervated muscle, rate of, 97.
- AUMANN, K. W. *See* YOUNG, AUMANN, HANEY and WYNIA, 467.
- Autonomic humoral substances, hypoglycemia and, 324.
- AXELROD, A. E., M. A. LIPTON and C. A. ELVEHJEM. The production of uncomplicated riboflavin deficiency in the dog, 703.
- B**ACHRACH, W. H. *See* FOGELSON and BACHRACH, 121.

- BALDES, E. J. See HERRICK, GRINDLAY, BALDES and MANN, 338.
- BALL, G. H. The pH of the digestive tract in the living albino rat as determined by the capillary glass electrode, 175.
- BARNES, L. L. See BOGART, SPERLING, BARNES and ADSELL, 355.
- BATEMAN, W. H. See HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- BECKWITH, J. R. and A. CHANUTIN. The pressor effect of kidney extracts of intact and partially nephrectomized rats, 562.
- BENDER, M. B. and S. SIEGAL. Release of autonomic humoral substances in hypoglycemic cats and monkeys, 324.
- BERGH, G. S. and J. A. LAYNE. A demonstration of the independent contraction of the sphincter of the common bile duct in human subjects, 690.
- BERKSON, J., T. B. MAGATH and M. HURN. The error of estimate of the blood cell count as made with the hemocytometer, 309.
- Bile duct sphincter, common, contraction of, 690.
- BLACK, S. See MCKIBBIN, MADDEN, BLACK and ELVEHJEM, 102.
- Bladder trigone, micturition after removal of, 195.
- Blood amino acids, effect of endocrine extracts on, 772.
- cell count, error of, made with hemocytometer, 309.
- cells, red, diameter of, in women, 382.
- flow and potassium liberation from muscle, 139.
- —, cerebral, recording of, 488.
- —, in abdominal arteries, exercise and, 338.
- —, peripheral, influence of massive doses of insulin on, 124.
- , muscle and, electrolyte and water exchange in, 635.
- pressure, cerebral, recording of, 488.
- —, in adrenal insufficiency, 133.
- —, measurements in anesthesia, operation and shock, 238.
- Blood pressure values in street dogs, 233.
- —. See Hypertension.
- —. See Hypotension.
- serum changes after exercise, 417.
- sugar, effect of acid stimulation of duodenum on, 298.
- BLUMENFELD, C. M. and F. W. CLAUSEN. The relationship between the adrenal and parathyroid glands, 577.
- BOAK, R. A. See FENN, WILDE, BOAK and KOENEMANN, 139.
- BOGART, R., G. SPERLING, L. L. BARNES and S. A. ADSELL. The influence of reproductive condition upon growth in the female rat, 355.
- Bone marrow, rabbit, metabolism of, in serum, 455.
- Bradycardia, rat, 608.
- Brain changes from depletion of extracellular electrolytes, 683.
- tissues, recording of focal activities in, 488.
- BREWER, G. A statistical study of cobalt polycythemia in the dog, 345.
- BRICKER, J. W. See GESELL, MAGEE and BRICKER, 615.
- Bronchial calibre, reflex changes in, with respiration, 276.
- BROOKS, C. McC. and E. F. LAMBERT. The effect of hypophyseal stalk transection on the gonadotropic functions of the rabbit's hypophysis, 57.
- BROWN, R. C. See GESELL, ATKINSON and BROWN, 629.
- BROWNE, J. S. L. See HOWLETT and BROWNE, 225.
- Brunner's glands, response of, to secretin, 121.
- BURCH, G. E. See MAYERSON and BURCH, 258.
- C**ALORIGENIC action of adrenalin, 281.
- CAMPBELL, K. H. See RICHTER and CAMPBELL, 291.
- Carbohydrate and fat diets, tissue hydration on, 537.
- metabolism, anterior pituitary extract and adrenal cortex in, 552.
- Carbon dioxide, arterial, response to, carotid body reflexes and, 1.

- Carbonic anhydrase, gastric, in dogs, 725.
- Cardiac acceleration, reflex, and liberation of sympathomimetic substances during acetylcholine hypotension, 467.
- action current, electrical doublet theory of, 547.
- venous system, effect of chronic occlusion of, 179.
- Cardiac. *See* Heart.
- Cardio-accelerator fibers in vagus nerve of dog, 246.
- Carotid body reflexes and responses to arterial CO₂, 1.
- Cerebral blood flow, pH, electrical activities and blood pressure, focal, recording of, 488.
- lesion effects on olfactory conditioned reflexes, 754.
- CHANUTIN, A. *See* BECKWITH and CHANUTIN, 562.
- Chlorides, intestinal absorption of, 603.
- Cholinergic effects, relative, of estrogens, 147.
- CIPRIANI, A. *See* JASPER and CIPRIANI, 488.
- CLAUSEN, F. W. *See* BLUMENFELD and CLAUSEN, 577.
- CLEGHORN, R. A. The effect of occlusion of the carotids and the injection of ephedrine on the blood pressure of cats in adrenal insufficiency, 133.
- Coagulation, inhibition of, by electrolytes and heparin, 399.
- Cobalt polycythemia, 345.
- Cold, temperature regulatory responses to, 736.
- COLEMAN, H. W. *See* HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- COLLINS, D. A. *See* WOOD, COLLINS and MOE, 635.
- Colon, correlation of activity and transportation in, 514.
- COLSON, G. M. *See* HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- Conditioned reflex secretion, 10.
- Coronary veins, effect of chronic occlusion of, 179.
- Cortin after partial and complete hepatectomy, 729.
- D**AVENPORT, H. W. Gastric carbonic anhydrase in dogs, 725.
- Degeneration, Wallerian, 19.
- , —, transmission in, 45.
- DEMPSEY, E. W. *See* LISSAK, DEMPSEY and ROSENBLUETH, 45.
- , *See* ROSENBLUETH and DEMPSEY, 19.
- Denervated muscle, rate of atrophy in, 97.
- Diabetes, phlorhizin, pituitary and metabolism in, 111.
- Diet and bradycardia in rat, 608.
- and gonadotropic content of pituitary, 493.
- , effect of age and, on electrolyte changes in stimulated muscle, 440.
- Digestive tract in rat, pH of, 175.
- Diuresis, water, experimental control of, pituitary and, 506.
- DONELSON, E. G., J. M. LEICHSENRING and L. M. WALL. The diameter of red blood cells in healthy young women, 382.
- DOSNE, C. *See* SELYE and DOSNE, 729.
- Doublet theory of cardiac action current, 547.
- DRAWE, C. E. *See* ASHMAN, WILDE and DRAWE, 547.
- DRIPPS, R. D., JR. *See* SCHMIDT, DUMKE and DRIPPS, 1.
- DRIVER, R. L. *See* SEALOCK, MURLIN and DRIVER, 92.
- DUMKE, P. R. *See* SCHMIDT, DUMKE and DRIPPS, 1.
- Duodenum, effect of acid stimulation of, on blood sugar, 298.
- Dynamics of frog and turtle hearts, 709.
- E**LECTROLYTE and water exchange in muscle and blood, 635.
- changes in stimulated muscle, 440.
- Electrolytes and heparin, inhibition of coagulation by, 399.
- , extracellular, brain changes from depletion of, 683.
- ELMAN, R. Acute hypoproteinemia following a single severe hemorrhage in the fasting dog, 332.

- ELVEHJEM, C. A. See AXELROD, LIPTON and ELVEHJEM, 703.
- See MCKIBBIN, MADDEN, BLACK and ELVEHJEM, 102.
- EMERY, F. E. See GRIFFITH, EMERY and LOCKWOOD, 281.
- Endocrine extracts, effect of, on blood amino acids, 772.
- Enterocrinin, food and, intestinal response to, 70.
- Ergotoxine, responses of nictitating membrane after, 695.
- ESSEX, H. E. See HESTER, ESSEX and MANN, 592.
- Estrogens, relative cholinergic effects of, 147.
- EVANS, R. D. See HERTZ, ROBERTS, MEANS and EVANS, 565.
- Excretion, renal tubular, pituitary extract and, 747.
- Exercise and blood flow in abdominal arteries, 338.
- , blood serum changes after, 417.
- Eye, sympathetic action in accommodation for far vision, 588.
- EYSTER, J. A. E. See GOLDBERG and EYSTER, 390.
- F**ARR, L. E. and L. K. ALPERT. The effect of endocrine extracts on the amino acids in the blood with incidental findings on the blood sugar and urea, 772.
- Fat diets, carbohydrate and, tissue hydration of, 537.
- Female reproductive condition and growth, 355.
- FENN, W. O., W. S. WILDE, R. A. BOAK and R. H. KOENEMANN. The effect of blood flow on potassium liberation from muscle, 139.
- Fetal size, relation of placental permeability to, 154.
- Fibrillation, ventricular, from single shocks, 500.
- FLEXNER, L. B. and R. B. ROBERTS. The measurement of placental permeability with radioactive sodium, 154.
- FOGELSON, S. J. and W. H. BACHRACH. Response of Brunner's glands to secretin, 121.
- Food and enterocrinin, intestinal response to, 70.
- Formalin, effects of, on hormones of pregnancy urine, 425.
- FOSTER, F. I. See REYNOLDS and FOSTER, 147.
- FREEMAN, N. E. and W. A. JEFFERS. Effect of progressive sympathectomy on hypertension produced by increased intracranial pressure, 662.
- FRIEDMAN, B., E. SOMKIN and E. T. OPPENHEIMER. The relation of renin to the adrenal gland, 481.
- FRIEDMAN, G. S. See FRIEDMAN and FRIEDMAN, 493.
- FRIEDMAN, M. H. and G. S. FRIEDMAN. The relation of diet to the restitution of the gonadotropic hormone content of the discharged rabbit pituitary, 493.
- G**AEBLER, O. H. and W. J. ZIMMERMAN. Effects of an anterior pituitary growth preparation on metabolism in phlorhizin diabetes, 111.
- Ganglionic synaptic transmission, neuromuscular and, 31.
- GANTT, W. H. See KATZENELBOGEN, LOUCKS and GANTT, 10.
- Gastric carbonic anhydrase in dogs, 725.
- secretion, attempt to condition, to histamin, 10.
- Gastro-intestinal. See Alimentary.
- GELLHORN, E. See YESINICK and GELLHORN, 185.
- GESELL, R., A. K. ATKINSON and R. C. BROWN. The origin of respiratory activity patterns, 629.
- , C. S. MAGEE and J. W. BRICKER. Activity patterns of the respiratory neurons and muscles, 615.
- GIDDINGS, G. See HALDI and GIDDINGS, 537.
- Glands, Brunner's, response of, to secretin, 121.
- GLAZKO, A. J. and D. M. GREENBERG. The mechanism of the inhibiting effect of electrolytes and heparin on blood coagulation, 399.
- Glomerular intermittence, 159.
- Glycotropic substance of anterior pituitary, 270.

- GOLDBERG, H. and J. A. E. EYSTER. The relation of electrical and mechanical events in the ventricle of the turtle, 390.
- GONADAL effect of pituitary secretion, 169.
- GONADOTROPIC antagonist in pituitary, heat and, 532.
- content of pituitary, diet and, 493.
- functions of hypophysis, 57.
- GRATTAN, J. F. See JENSEN and GRATTAN, 270.
- See JENSEN, TOLKSDORF and GRATTAN, 532.
- GRAUBARD, M. and G. PINCUS. Uterine changes in the rabbit with the advent of pregnancy, 653.
- GRAY, J. S. See LOEW, GRAY and IVY, 298.
- GREENBERG, D. M. See GLAZKO and GREENBERG, 399.
- GREGG, D. E. See THORNTON and GREGG, 179.
- GRIFFITH, F. R., JR., F. E. EMERY and J. E. LOCKWOOD. The calorogenic action of adrenalin: proportionality with dose, 281.
- GRINDLAY, J. H. See HERRICK, GRINDLAY, BALDES and MANN, 338.
- GROLLMAN, A. See HARRISON, GROLLMAN and WILLIAMS, 716.
- Growth and atrophy, effects of, on muscle strength, 521.
- , female reproductive condition and, 355.
- H**AIMOVICI, H. and R. HODES. Preganglionic nerve regeneration in completely sympathectomized cats, 463.
- HALDI, J. and G. GIDDINGS. The water content of various organs of the albino rat on a high carbohydrate and a high fat diet, 537.
- HAMILTON, W. F., E. R. PUND, R. F. SLAUGHTER, W. A. SIMPSON, JR., G. M. COLSON, H. W. COLEMAN and W. H. BATEMAN. Blood pressure values in street dogs, 233.
- See VOLPITTO, WOODBURY and HAMILTON, 238.
- HANEY, H. F. See YOUNG, AUMANN, HANEY and WYNIA, 467.
- HARRISON, T. R., A. GROLLMAN and J. R. WILLIAMS, JR. The antipressor action of renal extracts and their capacity to reduce the blood pressure of hypertensive rats, 716.
- HATERIUS, H. O. Evidence of pituitary involvement in the experimental control of water diuresis, 506.
- HAYWARD, S. J. See LOEB and HAYWARD, 425.
- Heart muscle, electrical and mechanical events in, 390.
- Heart. See Bradycardia.
- See Cardiac.
- See Ventricle.
- Hearts, frog and turtle, dynamics of, 709.
- Heat, effect of, on gonadotropic pituitary antagonist, 532.
- , rôle of extremities in dissipation of, 782.
- HEMINGWAY, A. The standardization of temperature regulatory responses of dogs to cold, 736.
- Hemocytometer, error of blood cell count made with, 309.
- Hemorrhage, severe, hypoproteinemia following, 332.
- Heparin, inhibition of coagulation by electrolytes and, 399.
- Hepatectomy, partial and complete, cortin after, 729.
- HEPPEL, L. A. Effect of age and diet on electrolyte changes in rat muscle during stimulation, 440.
- The diffusion of radioactive sodium into the muscles of potassium-deprived rats, 449.
- HERRICK, J. F., J. H. GRINDLAY, E. J. BALDES and F. C. MANN. Effect of exercise on the blood flow in the superior mesenteric renal and common iliac arteries, 338.
- HERTZ, S., A. ROBERTS, J. H. MEANS and R. D. EVANS. Radioactive iodine as an indicator in thyroid physiology, 565.
- HESTER, H. R., H. E. ESSEX and F. C. MANN. Secretion of urine in the chicken (*Gallus domesticus*), 592.
- HINES, H. M. and G. C. KNOWLTON. The effect of various conditions upon the rate of atrophy in denervated muscle, 97.

- HINES, H. M. and G. C. KNOWLTON. See KNOWLTON and HINES, 521.
- Histamin, attempt to condition gastric secretion to, 10.
- HODES, R. See HAIMOVICI and HODES, 463.
- Hormones of pregnancy urine, effects of formalin on, 425.
- HORTON, B. T. See ROTH, HORTON and SHEARD, 782.
- HOWLETT, J. and J. S. L. BROWNE. Studies on water balance in the alarm reaction, 225.
- HURN, M. See BERKSON, MAGATH and HURN, 309.
- Hydration, tissue, on carbohydrate and fat diets, 537.
- Hypertension and renal dysfunction, 716.
- , progressive sympathectomy and, 662.
- , renal, pulmonary arterial pressure in, 433.
- Hypertension. See Blood pressure.
- Hypoglycemia and autonomic humoral substances, 324.
- , anoxia and, intracranial pressure during, 185.
- Hypophysis, gonadotropic functions of, 57.
- Hypoproteinemia following severe hemorrhage, 332.
- Hypotension, acetylcholine, factors compensating, 467.
- Hypotension. See Blood pressure.
- I**NHIBITION of coagulation by electrolytes and heparin, 399.
- , reflex, effect of asphyxia on, 13.
- Insulin absorption from alimentary tract, 81.
- , intestinal absorption of, alkylresorcinols and, 92.
- , massive doses of, and peripheral blood flow, 124.
- Intestinal absorption of chlorides, 603.
- of insulin, alkylresorcinols and, 92.
- response to food and enterocinin, 70.
- Intestinal. See Alimentary.
- Intracranial pressure during anoxia and hypoglycemia, 185.
- Iodine, radioactive, in thyroid physiology, 565.
- IVY, A. C. See LOEW, GRAY and IVY, 298.
- J**ARCHO, L. W. and W. S. ROOT. The relation of labyrinthectomy to sensitization of the nictitating membrane in the cat, 526.
- JASPER, H. and A. CIPRIANI. A method for the simultaneous recording of focal cerebral blood flow, pH, electrical activity and blood pressure, 488.
- JEFFERS, W. A. See FREEMAN and JEFFERS, 662.
- JEFFERS, W. L. See LANDIS, JEFFERS and SHIELS, 672.
- JENSEN, H. and J. F. GRATTAN. The identity of the glycotropic (anti-insulin) substance of the anterior pituitary gland, 270.
- JENSEN, H., S. TOLKSDORF and J. F. GRATTAN. The effect of heat on the gonadotropic pituitary antagonist, 532.
- K**ABAT, H. The cardio-accelerator fibers in the vagus nerve of the dog, 246.
- KATZ, L. N. and F. S. STEINITZ. Pulmonary arterial pressure in experimental renal hypertension, 433.
- KATZENELBOGEN, S., R. B. LOUCKS and W. H. GANTT. An attempt to condition gastric secretion to histamin, 10.
- Kidney extracts, heated, pressor effects of, 672.
- , pressor effect of, 562.
- KNOWLTON, G. C. and H. M. HINES. The effects of growth and atrophy upon the strength of skeletal muscle, 521.
- See HINES and KNOWLTON, 97.
- KOENEMANN, R. H. See FENN, WILDE, BOAK and KOENEMANN, 139.
- KOLB, L. C. The effect upon micturition of removal of the vesical trigone; a discussion of the mechanics of micturition, 195.

- L**ABYRINTHECTOMY and sympathetic sensitization, 526.
- LAMBERT, E. F. See BROOKS and LAMBERT, 57.
- LANARI, A. See ROSENBLUETH, LISSAK and LANARI, 31.
- LANDIS, E. M., W. L. JEFFERS and E. H. SHIELDS. The pressor effects of homologous and heterologous injections of heated kidney extracts, 672.
- LAYNE, J. A. See BERGH and LAYNE, 690.
- LEE, D. D. See ADDIS, LEE, LEW and POO, 544.
- LEICHSENING, J. M. See DONELSON, LEICHSENING and WALL, 382.
- LEW, W. See ADDIS, LEE, LEW and POO, 544.
- LIFSON, N. Absorption of chloride against concentration gradients from small intestines of rats and of rabbits, 602.
- LIPTON, M. A. See AXELROD, LIPTON and ELVEHJEM, 703.
- LISSAK, K., E. W. DEMPSEY and A. ROSENBLUETH. The failure of transmission of motor nerve impulses in the course of Wallerian degeneration, 45.
- See ROSENBLUETH, LISSAK and LANARI, 31.
- Liver. See Hepatectomy.
- LOCKWOOD, J. E. See GRIFFITH, EMERY and LOCKWOOD, 281.
- LOEB, L. and S. J. HAYWARD. The effects of formalin on the hormones of human pregnancy urine, 425.
- LOEW, E. R., J. S. GRAY and A. C. IVY. The effect of acid stimulation of the duodenum upon experimental hyperglycemia and utilization of glucose, 298.
- LOUCKS, R. B. See KATZENELBOGEN, LOUCKS and GANTT, 10.
- Lymph flow, cervical, nasopharyngeal temperature and, 349.
- M**CARRELL, J. D. The effect of warm and of cold nasopharyngeal irrigation on cervical lymph flow, 349.
- MACDONALD, D. G. H. and E. W. MCHENRY. Studies on rat bradycardia, 608.
- MCHENRY, E. W. See MACDONALD and MCHENRY, 608.
- McKIBBIN, J. M., R. J. MADDEN, S. BLACK and C. A. ELVEHJEM. The importance of vitamin B₆ and factor W in the nutrition of dogs, 102.
- MADDEN, R. J. See McKIBBIN, MADDEN, BLACK and ELVEHJEM, 102.
- MAGATH, T. B. See BERKSON, MAGATH and HURN, 309.
- MAGEE, C. S. See GESELL, MAGEE and BRICKER, 615.
- MANN, F. C. See HERRICK, GRINDLAY, BALDES and MANN, 338.
- See HESTER, ESSEX and MANN, 592.
- MARGOLIS, M. N. See ABRAMSON, SCHKLOVEN, MARGOLIS and MIRSKY, 124.
- MAYERSON, H. S. and G. E. BURCH. Relationships of tissue (subcutaneous and intramuscular) and venous pressures to syncope induced in man by gravity, 258.
- MAYFIELD, H. L. See RICHARDSON and MAYFIELD, 583.
- MEANS, J. H. See HERTZ, ROBERTS, MEANS and EVANS, 565.
- Metabolism, carbohydrate, anterior pituitary extract and adrenal cortex in, 552.
- in phlorhizin diabetes, pituitary and, 111.
- of rabbit bone marrow in serum, 455.
- of spermatozoa, respiration and, 408.
- MEYER, R. K. See ROTHCHILD, MEYER and SPIELMAN, 213.
- Micturition after removal of vesical trigone, 195.
- , mechanics of, 195.
- MIRSKY, I. A. See ABRAMSON, SCHKLOVEN, MARGOLIS and MIRSKY, 124.
- MOE, G. K. See WOOD, COLLINS and MOE, 635.
- MORGAN, M. W., JR., J. M. D. OLSTED and W. G. WATROUS. Sympathetic action in accommodation for far vision, 588.

- MORISON, R. S. The effects of adrenaline and of nerve stimulation on the mechanical and electric responses of uterine muscle, 372.
- MORSE, M. and F. W. SCHLUTZ. Blood serum changes in the dog during recovery from exercise on the treadmill, 417.
- MURLIN, J. R. See SEALOCK, MURLIN and DRIVER, 92.
- See YOUNG, PHILLIPS and MURLIN, 81.
- Muscle and blood, electrolyte and water exchange in, 635.
- , denervated, rate of atrophy in, 97.
- , potassium liberation from, blood flow and, 139.
- , sphincter, of common bile duct, contraction of, 690.
- , stimulated, electrolyte changes in, 440.
- strength, effects of growth and atrophy on, 521.
- , summation in, refractory period and, 203.
- , uterine, response of, to adrenaline and nerve stimulation, 372.
- Muscles after potassium deprivation, diffusion of radioactive sodium into, 449.
- , respiratory neurons and, activity patterns of, 615.
- NASOPHARYNGEAL** temperature and cervical lymph flow, 349.
- NASSET, E. S. See SCHIFFRIN and NASSET, 70.
- NELSON, W. O. See SEGALOFF and NELSON, 475.
- Nerve regeneration, preganglionic, after sympathectomy, 463.
- stimulation, adrenaline and, response of uterine muscle to, 372.
- transmission in Wallerian degeneration, 45.
- , vagus, of dog, cardio-accelerator fibers in, 246.
- Neuromuscular and ganglionic synaptic transmission, 31.
- Neurons and muscles, respiratory, activity patterns of, 615.
- NICHOLSON, H. C. and R. H. TRIMBY. An attempt to detect reflex changes in bronchial calibre synchronous with respiration, 276.
- Nictitating membrane, responses of, after ergotoxine, 695.
- Nutrition, vitamin B₆ and factor W in, 102.
- OESTROGEN-PROGESTERONE** interaction, 213.
- Olfactory conditioned reflexes, cerebral lesion effects on, 754.
- OLMSTED, J. M. D. See MORGAN, OLNSTED and WATROUS, 588.
- OPPENHEIMER, E. T. See FRIEDMAN, SOMKIN and OPPENHEIMER, 481.
- PARATHYROID** glands, relationship between adrenal and, 577.
- pH of digestive tract in rat, 175.
- PHILLIPS, W. A. See YOUNG, PHILLIPS and MURLIN, 81.
- Phlorhizin diabetes, pituitary and metabolism in, 111.
- PINCUS, G. See GRAUBARD and PINCUS, 653.
- Pituitary and experimental control of water diuresis, 506.
- and metabolism in phlorhizin diabetes, 111.
- , anterior, glycotropic substance of, 270.
- extract and tubular excretion, 747.
- , gonadotropic antagonist in, heat and, 532.
- , gonadotropic content of, diet and, 493.
- secretion, gonadal effect of, 169.
- Placental permeability, relation of, to fetal size, 154.
- Placentomata in castrate rat, 213.
- Polycythemia, cobalt, 345.
- Poo, L. J. See ADDIS, LEE, LEW and Poo, 544.
- Potassium deprivation, diffusion of radioactive sodium into muscles after, 449.
- liberation from muscle, blood flow and, 139.
- Preganglionic nerve regeneration after sympathectomy, 463.
- Pregnancy and uterine changes in rabbit, 653.
- urine, effects of formalin on hormones of, 425.

- Pressor effect of kidney extracts, 562.
 — effects of heated kidney extracts, 672.
- Progesterone interaction, oestrogen-, 213
- PROSSER, C. L. See SICHEL and PROSSER, 203.
- Protein, foreign, parenterally administered, utilization of, 544.
- Pulmonary arterial pressure in renal hypertension, 433.
- PUND, E. R. See HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- R**ADIOACTIVE iodine in thyroid physiology, 565.
 — sodium, measurement of placental permeability with, 154.
- Reaction, alarm, water balance in, 225.
- Reflex changes in bronchial calibre with respiration, 276.
 — inhibition, effect of asphyxia on, 13.
- Reflexes, carotid body, and response to arterial CO_2 , 1.
 —, olfactory conditioned, cerebral lesion effects on, 754.
- Refractory period and summation in muscle, 203.
- Renal dysfunction, hypertension and, 716.
 — extracts, anti-pressor action of, 716.
 — hypertension, pulmonary arterial pressure in, 433.
 — tubular excretion, pituitary extract and, 747.
- Renin, relation of, to adrenal gland, 481.
- Reproductive condition, female, and growth, 355.
- Respiration and metabolism of spermatozoa, 408.
 —, reflex changes in bronchial calibre with, 276.
 —, response of, to arterial CO_2 , 1.
- Respiratory activity patterns, origin of, 629.
 — mechanism, activity patterns of, 615.
- REYNOLDS, S. R. M. and F. I. FOSTER. Relative cholinergic effects of selected estrogens, 147.
- Riboflavin deficiency, uncomplicated, production of, 703.
- RICHARDSON, J. E. and H. L. MAYFIELD. The amount of ascorbic acid excreted at each urination during twenty-four-hour periods, 583.
- RICHTER, C. P. and K. H. CAMPBELL. Sucrose taste thresholds of rats and humans, 291.
- ROBERTS, A. See HERTZ, ROBERTS, MEANS and EVANS, 565.
- ROBERTS, R. B. See FLEXNER and ROBERTS, 154.
- ROOT, W. S. See JARCHO and ROOT, 526.
- ROSENBLUTH, A. and E. W. DEMPSEY. A study of Wallerian degeneration, 19.
 —, K. LISSAK and A. LANARI. An explanation of the five stages of neuromuscular and ganglionic synaptic transmission, 31.
 —. See LISSAK, DEMPSEY and ROSENBLUTH, 45.
- ROTH, G. M., B. T. HORTON and C. SHEARD. The relative rôles of the extremities in the dissipation of heat from the human body under various environmental temperatures and relative humidities, 782.
- ROTHCHILD, I., R. K. MEYER and M. A. SPIELMAN. A quantitative study of oestrogen-progesterone interaction in the formation of placentomata in the castrate rat, 213.
- RUSSELL, J. A. The relationship of the anterior pituitary and the adrenal cortex in the metabolism of carbohydrate, 552.
- S**CHIFFRIN, M. J. and E. S. NASSET. The response of jejunum and ileum to food and enterocerinin, 70.
- SCHKLOVEN, N. See ABRAMSON, SCHKLOVEN, MARGOLIS and MIRSKY, 124.
- SCHLUTZ, F. W. See MORSE and SCHLUTZ, 417.
- SCHMIDT, C. F., P. R. DUMKE and R. D. DRIPPS, JR. The part played by carotid body reflexes in the respiratory response of the dog to small changes in the carbon dioxide tension in the arterial blood, 1.

- SEALOCK, R. R., J. R. MURLIN and R. L. DRIVER. A comparative study of the effect of alkylresorcinols and related compounds upon the absorption of insulin from isolated intestinal loops of anesthetized dogs, 92.
- Secretin, response of Brunner's glands to, 121.
- Secretion, conditioned gastric reflex, 10.
— of urine in chicken, 592.
- SEGALOFF, A. and W. O. NELSON. The thymus-adrenal relationship, 475.
- SELYE, H. and C. DOSNE. Effect of cortin after partial and after complete hepatectomy, 729.
- Sensitization, sympathetic, labyrinthectomy and, 526.
- Serum, horse, parenterally administered, utilization of, 544.
—, metabolism of rabbit bone marrow in, 455.
- SHANNON, E. W. and C. J. WIGGERS. The dynamics of the frog and turtle hearts—The non-refractory phase of systole, 709.
- SHEARD, C. See ROTH, HORTON and SHEARD, 782.
- SHETTLES, L. B. The respiration of human spermatozoa and their response to various gases and low temperatures, 408.
- SHIELDS, E. H. See LANDIS, JEFFERS and SHIELDS, 672.
- Shock, blood pressure measurements in anesthesia, operation and, 238.
- SICHEL, F. J. M. and C. L. PROSSER. Summation and the absence of a refractory period in isolated skeletal muscle fibers, 203.
- SIEGAL, S. See BENDER and SIEGAL, 324.
- SILVETTE, H. The influence of post-pituitary extract on the excretion of water and chlorides by the renal tubules, 747.
- SIMPSON, W. A. See HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- SLAUGHTER, R. F. See HAMILTON, PUND, SLAUGHTER, SIMPSON, COLSON, COLEMAN and BATEMAN, 233.
- Sodium, radioactive, diffusion of, into muscles after potassium deprivation, 449.
- SOMKIN, E. See FRIEDMAN, SOMKIN and OPPENHEIMER, 481.
- SPEHLING, G. See BOGART, SPEHLING, BARNES and ASDELL, 355.
- Spermatozoa, viability and metabolism of, 408.
- Sphincter, common bile duct, contraction of, 690.
- SPIELMAN, M. A. See ROTHCHILD, MEYER and SPIELMAN, 213.
- STEINITZ, F. S. See KATZ and STEINITZ, 433.
- Stimulation, electrolyte changes in muscle during, 440.
- Sucrose taste thresholds, 291.
- Sympathectomy, preganglionic nerve regeneration after, 463.
—, progressive, and hypertension, 662.
- Sympathetic action in accommodation for far vision, 588.
— sensitization, labyrinthectomy and, 526.
- Sympathomimetic substances, liberation of, reflex cardiac acceleration and, during acetylcholine hypotension, 467.
- Synaptic transmission, 31.
- Syncope, tissue and venous pressures in, 258.
- Systole, non-refractory phase of, 709.
- TASTE** thresholds, sucrose, 291.
Temperature regulatory responses to cold, 736.
- TEMPLETON, R. D. See ADLER and TEMPLETON, 514.
- THORNTON, J. J. and D. E. GREGG. Effect of chronic cardiac venous occlusion on coronary arterial and cardiac venous hemodynamics, 179.
- Thymus-adrenal relationship, 475.
- Thyroid physiology, radioactive iodine in, 565.
- Tissue and venous pressures in syncope, 258.
— hydration on carbohydrate and fat diets, 537.
- TOLKSDORF, S. See JENSEN, TOLKSDORF and GRATAN, 532.

TRIMBY, R. H. See NICHOLSON and TRIMBY, 276.

URINE, excretion of ascorbic acid in, 583.

—, pregnancy, effects of formalin on hormones of, 425.

—, secretion in chicken, 592.

Uterine changes in rabbit with pregnancy, 653.

—, muscle, response of, to adrenaline and nerve stimulation, 372.

VAGUS. See Nerve.

VAN HARREVELD, A. The effect of asphyxia on reflex inhibition, 13.

Venous pressures, tissue and, in syncope, 258.

Ventricle, turtle, electrical and mechanical events in, 390.

Ventricle. See Heart.

Ventricular fibrillation from single shocks, 500.

Vitamin B₆ and factor W in nutrition, 102.

VOLPITTO, P. P., R. A. WOODBURY and W. F. HAMILTON. Direct arterial and venous pressure measurements in man as affected by anesthesia, operation and shock, 238.

WALL, L. M. See DONELSON, LEICHSENRING and WALL, 382.

Wallerian degeneration, 19.

—, transmission in, 45.

WARREN, C. O., JR. The metabolism of rabbit bone marrow in serum, 455.

Water balance in alarm reaction, 225.

—, diuresis, experimental control of, pituitary and, 506.

—, exchange, electrolyte and, in muscle and blood, 635.

WATROUS, W. G. See MORGAN, OLMSTED and WATROUS, 588.

WÉGRÍA, R. See WIGGERS and WÉGRÍA, 500.

WHITE, H. L. Observations indicating

absence of glomerular intermittence in normal dogs and rabbits, 159.

WIGGERS, C. J. and R. WÉGRÍA. Ventricular fibrillation due to single, localized induction and condenser shocks applied during the vulnerable phase of ventricular systole, 500.

—, See SHANNON and WIGGERS, 709.

WILDE, W. S. See ASHMAN, WILDE and DRAWE, 547.

—, See FENN, WILDE, BOAK and KOENEMANN, 139.

WILLIAMS, J. R., JR. See HARRISON, GROLLMAN and WILLIAMS, 716.

WOOD, E. H., D. A. COLLINS and G. K. MOE. Electrolyte and water exchanges between mammalian muscle and blood in relation to activity, 635.

WOODBURY, R. A. See VOLPITTO, WOODBURY and HAMILTON, 238.

WYNIA, F. See YOUNG, AUMANN, HANEY and WYNIA, 467.

YANNET, H. Changes in the brain resulting from depletion of extracellular electrolytes, 683.

YESINICK, L. and E. GELLHORN. Studies on increased intracranial pressure and its effects during anoxia and hypoglycemia, 185.

YOUNG, W. B., K. W. AUMANN, H. F. HANEY and F. WYNIA. Reflex cardiac acceleration and liberation of sympathomimetic substances in unanesthetized dogs during acetylcholine hypotension, 467.

YOUNG, L. E., W. A. PHILLIPS and J. R. MURLIN. New results on the absorption of insulin from the alimentary tract, 81.

ZECKWER, I. T. The effect of the pituitary secretion of castrated rats on the gonads of male rats joined in parabiosis, 169.

ZIMMERMAN, W. J. See GAEBLER and ZIMMERMAN, 111.

THE
AMERICAN JOURNAL
OF
PHYSIOLOGY

VOLUME 128

BALTIMORE, MD.
1939-1940

CONTENTS

NO. 1, DECEMBER, 1939

The Part Played by Carotid Body Reflexes in the Respiratory Response of the Dog to Small Changes in the Carbon Dioxide Tension in the Arterial Blood. <i>Carl F. Schmidt, Paul R. Dunke and Robert D. Dripps, Jr.</i>	1
An Attempt to Condition Gastric Secretion to Histamin. <i>S. Katzenbogen, Roger B. Loucks and W. Horsley Gantt</i>	10
The Effect of Asphyxia on Reflex Inhibition. <i>A. van Harreveld</i>	13
A Study of Wallerian Degeneration. <i>A. Rosenblueth and E. W. Dempsey</i>	19
An Explanation of the Five Stages of Neuromuscular and Ganglionic Synaptic Transmission. <i>A. Rosenblueth, K. Lissák and A. Lanari</i>	31
The Failure of Transmission of Motor Nerve Impulses in the Course of Wallerian Degeneration. <i>K. Lissák, E. W. Dempsey and A. Rosenblueth</i>	45
The Effect of Hypophysial Stalk Transection on the Gonadotropic Functions of the Rabbit's Hypophysis. <i>Chandler McCuskey Brooks and E. F. Lambert</i>	57
The Response of Jejunum and Ileum to Food and Enterocrinin. <i>M. J. Schiffman and E. S. Nasset</i>	70
New Results on the Absorption of Insulin from the Alimentary Tract. <i>L. E. Young, W. A. Phillips and J. R. Murlin</i>	81
A Comparative Study of the Effect of Alkylresorcinols and Related Compounds upon the Absorption of Insulin from Isolated Intestinal Loops of Anesthetized Dogs. <i>Robert R. Sealock, John R. Murlin and Robert L. Driver</i>	92
The Effect of Various Conditions upon the Rate of Atrophy in Denervated Muscle. <i>H. M. Hines and G. C. Knowlton</i>	97
The Importance of Vitamin B ₆ and Factor W in the Nutrition of Dogs. <i>J. M. McKibbin, R. J. Madden, Simon Black and C. A. Elvehjem</i>	102
Effects of an Anterior Pituitary Growth Preparation on Metabolism in Phlorhizin Diabetes. <i>O. H. Gaebler and Walter J. Zimmerman</i>	111
Response of Brunner's Glands to Secretin. <i>S. J. Fogelson and W. H. Bachrach</i>	121
Influence of Massive Doses of Insulin on Peripheral Blood Flow in Man. <i>David I. Abramson, Norman Schkloven, Meyer N. Margolis and I. Arthur Mirsky</i>	124
The Effect of Occlusion of the Carotids and the Injection of Ephedrine on the Blood Pressure of Cats in Adrenal Insufficiency. <i>R. A. Cleghorn</i>	133
The Effect of Blood Flow on Potassium Liberation from Muscle. <i>W. O. Fenn, W. S. Wilde, Ruth A. Boak and R. H. Koehnemann</i>	139
Relative Cholinergic Effects of Selected Estrogens. <i>Samuel R. M. Reynolds and Frances I. Foster</i>	147
The Measurement of Placental Permeability with Radioactive Sodium. The Relation of Placental Permeability to Fetal Size in the Rat. <i>Louis B. Flexner and Richard B. Roberts</i>	154
Observations Indicating Absence of Glomerular Intermittence in Normal Dogs and Rabbits. <i>H. L. White</i>	159
The Effect of the Pituitary Secretion of Castrated Rats on the Gonads of Male Rats Joined in Parabiosis. <i>Isolde T. Zeckwer</i>	169
The pH of the Digestive Tract in the Living Albino Rat as Determined by the Capillary Glass Electrode. <i>Gordon H. Ball</i>	175

Effect of Chronic Cardiac Venous Occlusion on Coronary Arterial and Cardiac Venous Hemodynamics. <i>John J. Thornton and Donald E. Gregg</i>	179
Studies on Increased Intracranial Pressure and Its Effects During Anoxia and Hypoglycemia. <i>L. Yesinick and E. Gellhorn</i>	185
The Effect upon Micturition of Removal of the Vesical Trigone: A Discussion of the Mechanics of Micturition. <i>Lawrence C. Kolb</i>	195

NO. 2. JANUARY, 1940

Summation and the Absence of a Refractory Period in Isolated Skeletal Muscle Fibers. <i>F. J. M. Sichel and C. L. Prosser</i>	203
A Quantitative Study of Oestrogen-Progesterone Interaction in the Formation of Placentomata in the Castrate Rat. <i>Irving Rothchild, Roland K. Meyer and M. A. Spielman</i>	213
Studies on Water Balance in the Alarm Reaction. <i>John Howlett and J. S. L. Brown</i>	225
Blood Pressure Values in Street Dogs. <i>W. F. Hamilton, Edgar R. Pund, R. F. Slaughter, W. A. Simpson, Jr., G. M. Colson, H. W. Coleman and W. H. Bateman</i>	233
Direct Arterial and Venous Pressure Measurements in Man as Affected by Anesthesia, Operation and Shock. <i>P. P. Volpito, R. A. Woodbury and W. F. Hamilton</i>	238
The Cardio-Accelerator Fibers in the Vagus Nerve of the Dog. <i>Herman Kabat</i>	246
Relationships of Tissue (Subcutaneous and Intramuscular) and Venous Pressures to Syncope Induced in Man by Gravity. <i>H. S. Mayerson and G. E. Burch</i>	258
The Identity of the Glycotropic (Anti-Insulin) Substance of the Anterior Pituitary Gland. <i>H. Jensen and J. F. Grattan</i>	270
An Attempt to Detect Reflex Changes in Bronchial Calibre Synchronous with Respiration. <i>Hayden C. Nicholson and Robert H. Trimby</i>	276
The Calorigenic Action of Adrenaline: Proportionality with Dose. <i>Fred R. Griffith, Jr., F. E. Emery and Julia E. Lockwood</i>	281
Sucrose Taste Thresholds of Rats and Humans. <i>Curt P. Richter and Kathryn H. Campbell</i>	291
The Effect of Acid Stimulation of the Duodenum upon Experimental Hyperglycemia and Utilization of Glucose. <i>E. R. Low, J. S. Gray and A. C. Ivy</i>	298
The Error of Estimate of the Blood Cell Count as Made with the Hemocytometer. <i>Joseph Berkson, Thomas B. Magath and Margaret Hurn</i>	309
Release of Autonomic Humoral Substances in Hypoglycemic Cats and Monkeys. <i>M. B. Bender and S. Siegal</i>	324
Acute Hypoproteinemia Following a Single Severe Hemorrhage in the Fasting Dog. <i>Robert Elman, with the technical assistance of Ray Charnas and Harriet Wolff</i>	332
Effect of Exercise on the Blood Flow in the Superior Mesenteric, Renal and Common Iliac Arteries. <i>J. F. Herrick, John H. Grindlay, Edward J. Baldes and Frank C. Mann</i>	338
A Statistical Study of Cobalt Polycythemia in the Dog. <i>George Brewer</i>	345
The Effect of Warm and of Cold Nasopharyngeal Irrigation on Cervical Lymph Flow. <i>Jane D. McCarrell</i>	349
The Influence of Reproductive Condition upon Growth in the Female Rat. <i>R. Bogart, G. Sperling, L. L. Barnes and S. A. Asdell</i>	355
The Effects of Adrenaline and of Nerve Stimulation on the Mechanical and Electric Responses of Uterine Muscle. <i>Robert S. Morison</i>	372
The Diameter of Red Blood Cells in Healthy Young Women. <i>Eva G. Donelson, Jane M. Leichsenring and Lucille M. Wall</i>	382

The Relation of Electrical and Mechanical Events in the Ventricle of the Turtle. <i>Harold Goldberg and J. A. E. Eyster</i>	390
The Mechanism of the Inhibiting Effect of Electrolytes and Heparin on Blood Coagulation. <i>Anthony J. Glazko and David M. Greenberg</i>	399
The Respiration of Human Spermatozoa and Their Response to Various Gases and Low Temperatures. <i>Landrum B. Shettles</i>	408

NO. 3. FEBRUARY, 1940

Blood Serum Changes in the Dog during Recovery from Exercise on the Treadmill. <i>Minerva Morse and F. W. Schlutz</i>	417
The Effects of Formalin on the Hormones of Human Pregnancy Urine. <i>L. Loeb and S. J. Hayward</i>	425
Pulmonary Arterial Pressure in Experimental Renal Hypertension. <i>L. N. Katz and F. S. Steinitz</i>	433
Effect of Age and Diet on Electrolyte Changes in Rat Muscle during Stimulation. <i>Leon A. Heppel</i>	440
Diffusion of Radioactive Sodium into the Muscles of Potassium-Deprived Rats. <i>Leon A. Heppel</i>	449
The Metabolism of Rabbit Bone Marrow in Serum. <i>Charles O. Warren, Jr.</i>	455
Preganglionic Nerve Regeneration in Completely Sympathectomized Cats. <i>H. Haimovici and Robert Hodes</i>	463
Reflex Cardiac Acceleration and Liberation of Sympathomimetic Substances in Unanesthetized Dogs during Acetylcholine Hypotension. <i>W. B. Youmans, K. W. Aumann, H. F. Haney and F. Wynia</i>	467
The Thymus-Adrenal Relationship. <i>Albert Segaloff and Warren O. Nelson</i>	475
The Relation of Renin to the Adrenal Gland. <i>B. Friedman, E. Somkin and E. T. Oppenheimer</i>	481
A Method for the Simultaneous Recording of Focal Cerebral Blood Flow, pH, Electrical Activity and Blood Pressure. <i>Herbert Jasper and André Cipriani</i>	488
The Relation of Diet to the Restitution of the Gonadotropic Hormone Content of the Discharged Rabbit Pituitary. <i>Maurice H. Friedman and Gertrude S. Friedman</i>	493
Ventricular Fibrillation Due to Single, Localized Induction and Condenser Shocks Applied during the Vulnerable Phase of Ventricular Systole. <i>Carl J. Wiggers and René Wégria</i>	500
Evidence of Pituitary Involvement in the Experimental Control of Water Diuresis. <i>Hans O. Haterius</i>	506
The Correlation of Activity and Transportation in the Colon of the Dog. <i>Harry F. Adler and R. D. Templeton</i>	514
The Effects of Growth and Atrophy upon the Strength of Skeletal Muscle. <i>G. C. Knowlton and H. M. Hines</i>	521
The Relation of Labyrinthectomy to Sensitization of the Nictitating Membrane in the Cat. <i>Leonard W. Jarcho and Walter S. Root</i>	526
The Effect of Heat on the Gonadotropic Pituitary Antagonist. <i>H. Jensen, Sibylle Tolksdorf and J. F. Grattan</i>	532
The Water Content of Various Organs of the Albino Rat on a High Carbohydrate and a High Fat Diet. <i>John Haldi and Glenville Giddings</i>	537
The Utilization of Parenterally Administered Horse Serum by the Rat. <i>T. Addis, D. D. Lee, W. Lew and L. J. Poo</i>	544
The Validity of the Electrical Doublet Theory of the Cardiac Action Current. <i>Richard Ashman, Walter S. Wilde and Catherine E. Drapee</i>	547

The Relationship of the Anterior Pituitary and the Adrenal Cortex in the Metabolism of Carbohydrate. <i>Jane A. Russell</i>	552
The Pressor Effect of Kidney Extracts of Intact and Partially Nephrectomized Rats. <i>Julian R. Beckwith and Alfred Chanutin</i>	562
The Radioactive Iodine as an Indicator in Thyroid Physiology. <i>S. Hertz, A. Roberts, J. H. Means and R. D. Evans</i>	565
The Relationship between the Adrenal and Parathyroid Glands. <i>C. M. Blumenfeld and F. W. Clausen</i>	577
The Amount of Ascorbic Acid Excreted at Each Urination during Twenty-Four-Hour Periods. <i>Jessie E. Richardson and Helen L. Mayfield</i>	583
Sympathetic Action in Accommodation for Far Vision. <i>M. W. Morgan, Jr., J. M. D. Olmsted and W. G. Watrous</i>	588
Secretion of Urine in the Chicken (<i>Gallus domesticus</i>). <i>Harold R. Hester, Hiram E. Essex and Frank C. Mann</i>	592
Absorption of Chloride against Concentration Gradients from Small Intestines of Rats and of Rabbits. <i>Nathan Lifson</i>	603
Studies on Rat Bradycardia. <i>D. G. H. MacDonald and E. W. McHenry</i>	608
Activity Patterns of the Respiratory Neurons and Muscles. <i>Robert Gesell, Conway S. Magee and John W. Bricker</i>	615

NO. 4. MARCH, 1940

The Origin of Respiratory Activity Patterns. <i>Robert Gesell, A. Kearney Atkinson and Richard C. Brown</i>	629
Electrolyte and Water Exchanges between Mammalian Muscle and Blood in Relation to Activity. <i>E. H. Wood, D. A. Collins and G. K. Moe</i>	635
Uterine Changes in the Rabbit with the Advent of Pregnancy. <i>Mark Graubard and Gregory Pincus</i>	653
Effect of Progressive Sympathectomy on Hypertension Produced by Increased Intracranial Pressure. <i>Norman E. Freeman and William A. Jeffers</i>	662
The Pressor Effects of Homologous and Heterologous Injections of Heated Kidney Extracts. <i>E. M. Landis, W. L. Jeffers and E. H. Shiels</i>	672
Changes in the Brain Resulting From Depletion of Extracellular Electrolytes. <i>Herman Yannet, with the technical assistance of John F. Iannucci</i>	683
A Demonstration of the Independent Contraction of the Sphincter of the Common Bile Duct in Human Subjects. <i>George S. Bergh and John A. Layne</i>	690
The Responses of the Nictitating Membrane of the Cat to Certain Stimulants After Ergotamine. <i>G. H. Acheson</i>	695
The Production of Uncomplicated Riboflavin Deficiency in the Dog. <i>A. E. Axelrod, M. A. Lipton and C. A. Elvehjem</i>	703
The Dynamics of the Frog and Turtle Hearts—The Non-Refractory Phase of Systole. <i>Edward W. Shannon and Carl J. Wiggers</i>	709
The Anti-Pressor Action of Renal Extracts and Their Capacity to Reduce the Blood Pressure of Hypertensive Rats. <i>T. R. Harrison, Arthur Grollman and J. R. Williams, Jr.</i>	716
Gastric Carbonic Anhydrase in Dogs. <i>Horace W. Davenport</i>	725
Effect of Cortin After Partial and After Complete Hepatectomy. <i>Hans Selye and Christiane Dosue</i>	729
The Standardization of Temperature Regulatory Responses of Dogs to Cold. <i>Allen Hemingway</i>	736
The Influence of Post-Pituitary Extract on the Excretion of Water and Chlorides by the Renal Tubules. <i>Herbert Silvette</i>	747

Effect of Ablating the Frontal Lobes, Hippocampi, and Occipito-Parieto-Temporal (Excepting Pyriform Areas) Lobes on Positive and Negative Olfactory Conditioned Reflexes. <i>William F. Allen</i>	754
The Effect of Endocrine Extracts on the Amino Acids in the Blood With Incidental Findings on the Blood Sugar and Urea. <i>Lee E. Farr and Louis K. Alpert</i>	772
The Relative Roles of the Extremities in the Dissipation of Heat from the Human Body Under Various Environmental Temperatures and Relative Humidities. <i>Grace M. Roth, Bayard T. Horton and Charles Sheard</i>	782
Index	791